# Re-Engineering the Approach by Which the Federal Government Approves and Monitors the Creation of State Human Services Information Systems

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## I. Executive Summary

This paper suggests a new paradigm for improving the process for federal approval and monitoring of information technology (IT) projects. We propose that a fundamental shift in negotiating methods is needed to advance discussions between the states and the federal agencies. New alternatives to the present system should be developed through the use of principled negotiation and the interest-orientated processes that principled negotiating embraces.

We begin with an overview of the issues both state and federal agencies face under the current approach to approval and monitoring of IT projects. We also discuss principled negotiation and describe how its use can lead to solutions that take into account the interests of all involved. Next, as examples, we present our sense of the state and the federal interests as they relate to human services IT projects. These interests would need to be validated and improved upon by the process of principled negotiation that we are suggesting be used. Finally, we offer as an example and for discussion one possible approach to reengineering the process that would appear to meet most of the state and the federal interests that we have identified.

It is important to note that we are in no way trying to assign responsibility for the current situation to any one entity, either state or federal. Nor do we believe that it is the sole responsibility of any one entity to make improvements. The decisions that led to the current approach were made many years ago in an environment much different from that in which IT projects are conceived and managed today. To borrow an old political phrase, the current IT approval process was "OBE" – overtaken by events. Something that may have been appropriate when information systems were stable and mostly mainframe-based and when "big bang" systems development was the norm does not work very well to anybody's satisfaction when in today's world technology is changing rapidly and new approaches allow for better managed, more rapid, and more flexible system development and implementation. Also, to be frank, while states chafe under the current approach, they themselves have been responsible for numerous poorly managed, over budget, failed projects over the years. This paper's purpose is to suggest a discussion framework that we believe has a good chance of improving the IT approval

and monitoring process while at the same time acknowledging and incorporating the interests of the various parties.

We are not attempting to push a particular solution. Rather, we are suggesting the use of a known, workable approach that could produce solutions useful to all. The examples we have developed and the solution we suggest are provided for illustrative purposes. Our primary goal is to stimulate discussion and, we hope, commitment to seek improvement through the use of the process of principled negotiation.

## II. Introduction

The federal IT approval and monitoring process has several components. States that plan IT projects with budgets that exceed certain thresholds are required to do a number of things in order to receive federal funds. These include state preparation and federal approval of the Advanced Planning Document (APD) and similar documents, federal approval of procurement documents and contracts, and requirements for ongoing reporting.

The current IT approval process was created at a time when information system development efforts were seen as inherently risky undertakings that often overwhelmed the expertise and knowledge of many state agencies. Today, the development and implementation of information systems are usually done by states under more rigorous controls and with better project management techniques, thus making these activities a more routine part of normal procurement and administrative activities.

The technology that is used in state information technology efforts changes at a pace that requires nimble planning and implementation. Thanks in part to the creation of better software tools and techniques, the so-called big bang approach, in which the system is worked on for 3 to 5 years and then implemented all at once, has been replaced in many instances by smaller, faster-moving projects where development and implementation are done in phases in shorter amounts of time.

The current IT approval process is originated in an era when the big bang approach was the norm and long approval times were considered acceptable. Today, it is possible to

conceive and implement entire applications in the time it could take to have them approved under the current process. And, many states want to take advantage of the latest technology and expect vendors to be able to propose timely solutions that do that. However, technical advances occur so rapidly that, in some cases, new technologies have superceded the ones being proposed by the time approval is obtained and the system is developed. Then, when the system is implemented it can be in some sense "obsolete." Agencies may then be faced with having to obtain approval for the changes needed to update technology that fell behind during the approval process.

The problems with the current approval and monitoring process are a natural result of a changing technology environment. The controls that are currently in place were put there at a time when they were reasonable attempts to prudently manage state IT efforts and the use of federal funds that helped to support them. However, in the current environment, the existing approval process inhibits the implementation of automation projects in a timely and effective manner. (It should be noted that the federal approval timeline is not the only source of delay. State procurement processes can cumbersome and time-consuming, although many states, and the federal government, have been reengineering their procurement processes in recent years to improve timeliness and results.)

Welfare reform, the Workforce Investment Act, and independent efforts to pursue service integration all create a need for more coordination of services and collaboration of casework across traditional human services program boundaries. Better coordination of services in turn creates an accompanying need for cross-program information. Existing "stovepipe" information systems are ill equipped to provide this kind of data, and state and local governments are finding that they need to use information technology to dress up existing systems or create new ones to meet this need. The existing approval and monitoring process, because it is time-consuming and works better in support of individual, rather that multiple, federal programs, is not likely to be helpful when states seek federal financial support for "cross-program" systems.

All parties acknowledge that productive changes can be made to the current approval and monitoring process. Independent professional groups have already called for

modifications to the process so that it is more in tune with the current IT climate. There have been several workgroups formed between and among the various stakeholders in the process. Yet, these activities have not yet produced the kind of new paradigm that could resolve the multiple, long-standing concerns about the current process. We believe that a significant impediment to the creation of improvements has been the tension between the parties' stated positions and the interests that underlie those positions. Changing the status quo will require an approach that can help shift the dialogue from a bargaining paradigm based on positional negotiations to one that uses the proven process of principled negotiations.

## III. The Current IT Approval and Monitoring Process

As stated earlier, the existing process for approving and monitoring state IT projects was conceived in an earlier time and does not meet today's needs. This is not to say that there have not been efforts to improve the process and make better use of it. For instance, the federal agencies responsible for approving state IT plans have changed the process to make it better and to expedite the receipt of federal funds, and we applaud that. States are doing a better job of working within the existing approval process and using federal dollars to produce good results, and we applaud that too. However, despite these improvements and better results, we contend that the process is not working to the satisfaction of anyone and it is time to reengineer it in order to recognize both current business needs and current state IT capabilities.

### History

*"640K should be enough for anybody" – Bill Gates, 1981*

The federal law that created the existing IT approval process, Public Law 96-265, was signed into law in 1980, the year before Bill Gates said that. (The full history of the IT approval process and specifically the genesis of the current APD process is covered in great detail in Terence Maxwell's *Working Paper on Information Federalism – History of Welfare Information Systems*[1]*)*. Gates' statement illustrates how much our perspective about what is possible with IT has changed since the original IT approval

[1]Terrence Maxwell, *Working Paper on Information Federalism – History of Welfare Information Systems*, The Nelson A. Rockefeller Institute of Government, Albany, New York, 1999.

process was established in 1980. Just as 640K bytes of memory on a personal computer (PC) is no longer anywhere close to the leading edge of a PC's power, the IT approval process no longer reflects the reality of what is needed for good project oversight. As Maxwell details, there have been multiple efforts to adjust the IT approval process to the shifting IT realities of the marketplace. The federal agencies have made several positive and helpful changes to the system in an effort to reflect new modes of doing business, such as the creation of the Planning Advance Planning Document (PAPD) process and increases in the dollar thresholds where federal approval is required. However, there is widespread belief that the changes have not addressed the fundamental shift in what constitutes best practices in IT.

The original purpose for formalized federal oversight of state IT projects was to standardize protocols between the disparate state IT systems in order to facilitate information sharing between the various state governments. The federal government also believed that state business needs were similar enough that time and money could be saved by mandating that systems be "transferred" from one state to another. While many states were aggressively moving to capitalize on advances in computing technology and the attendant promise of increased efficiency and better service delivery, there was almost no coordination of IT activities between the states. As a result, states were developing systems that were incompatible with those in other states. In addition, at times federal funds were being used for IT development projects that were either ill conceived or poorly executed, or both. The problem was further exacerbated by the fact that sometimes states would attempt certain solutions that already had been tried and found wanting in other states. The result has been too many failures, the creation of new systems that use old technology, and new systems that do not adequately meet business needs.

The current approval process evolved over time to address these issues and the federal need for accountability for expenditure of federal funds. The thinking was that a central review and approval process would help to standardize protocols. The experience gained by a state could then be leveraged to help other states avoid earlier mistakes and emulate previous successes. The process was not perfect, but much value resulted from these early efforts to help state agencies negotiate the tricky terrain of IT development.

The relatively slow nature of the approval process was seen as a necessary brake on poorly planned projects, and the pace of technological change was slow enough that the approval process could fit within the system development lifecycles of the time.

However, technology changes began to happen at a pace that outstripped the capabilities of the existing IT approval process. Many agencies shifted from large, centralized mainframe solutions to relatively small, distributed solutions. This shift, combined with the pace of changing technology, made states much more sensitive to project lead times and development delays. System development lifecycles shrank to a point where the existing approval process became an inhibitor, rather than an enhancer, and it became possible for a technical approach to become "obsolete" by the time federal approvals were secured.

**Current Process**

It is helpful to examine the components of the current IT approval process in order to understand its limitations. The major stakeholders in the process are the federal agencies, which have the authority to approve projects and the state agencies. Other stakeholders include local governments (sometimes); vendors of hardware, software, and services which are affected by planning and procurement decisions; and the public, as represented by state legislatures and the Congress. Although this paper focuses on the state and federal agencies involved in the process, it is important to not forget the vital roles filled by the vendors and the legislative bodies.

Vendors are the entities that ultimately have to comply with procurement requirements and with contracts. Burdensome procurement procedures, bid requirements, and contract terms can cause vendors to increase bids to cover their risks and add significantly to overall project costs. (We suggest that, in a principled negotiation process, vendor interests be ascertained and taken into account, since they frequently play an important role in IT projects.)

Similarly, the Congress has a vital interest in the outcomes of the human services programs it creates and the expenditures of funds it appropriates to support those programs. State legislatures have an interest in the expenditure of state funds and in

how human services programs affect citizens. The needs of the Congress would be contained in the federal interests, while the needs of state legislatures would be contained in state interests.

The major components of the approval and monitoring process are:

The preparation and approval of the Planning Advance Planning Document (PAPD) is often the first step in the process. The PAPD covers all pre-planning activities and must be approved before funds expended for planning can receive federal match. Changes or additions to the PAPD after initial approval or planning that takes longer than forecasted both require approval of a PAPD Update (PAPDU). (The PAPD part of the process is relatively new, having been created by the federal agencies to help state agencies obtain planning funds more quickly than was possible under the original approval process. While the states appreciate the federal initiative to create the PAPD and it can be helpful, it is also another approval requirement that can add time and cost.)

Approval of the Implementation Advance Planning Document (IAPD) and the Detailed Implementation Schedule (DIS) are required for approval of federal funding for the development and implementation of the new system. Again, updates must be approved whenever there is a non-trivial change.

After all of the planning documents have been approved, the procurement process begins. The state prepares a Request for Proposals (RFP), which must receive federal approval before it can be issued. After a vendor has been selected, the contract must also be approved before work can begin. Many states also require that an oversight or quality assurance contractor be used to monitor the progress of the main contract and prepare regular reports about progress and project risk levels. The RFP and contract for oversight services must also receive federal approval.

After work on the project begins, the state must report monthly about project progress with additional reporting as requested by the federal agencies.

The point here is that the PAPD, IAPD, DIS, and their updates, if necessary, involve a lot of work by the states to create and modify them and a lot of work by the federal agencies to review and approve them, all during a time of government downsizing where federal and state staffing levels have shrunk and the capacity to prepare and review documents has decreased. There is often much back and forth negotiation over document modifications and approvals that can take months, and sometimes years. There is a similar back and forth over approval of the RFPs and contracts for implementation and oversight contractors. The need to prepare a special report each month adds work when copies of progress reports that are prepared for other purposes might suffice. The result is an approval process that can add a great deal of time to the length of the project, increase its cost, and, if negotiations go badly, create conflict between state and federal entities that need to work in partnership in other areas such as policy discussions, federal program reporting, and waiver negotiations. Another concern is that all of this approval activity kicks in when relatively low expenditure thresholds have been reached.

Another issue is that the system development methodology that is now used by many states does not easily fit into the development and implementation stages implicit in the PAPD, PAPDU, IAPD, IAPDU, and DIS schema. This structure assumes that system planning, development, and implementation form a sequential process with one phase ending before the next one begins and little overlap between phases. In fact, newer development tools, techniques, and practices allow a blurring of the lines and overlap of the stages so that projects can be fast-moving and flexible to meet constantly changing business needs.

One of the peculiarities of the current IT approval process is how it treats expenditures for IT as being fundamentally different from other types of expenditure. This reflects the view of the creators of the process that IT projects contained a lot of risk. We contend that, while there is still much risk inherent in any IT project, many states have processes in place for defining project scope, procuring contractor services, and managing projects that allow risk to be managed and projects to be successful. The problem with treating IT expenditures differently from other expenditures can be seen in the following hypothetical example. An agency can hire 100 new workers for a program with no federal approval other than the normal yearly review of the agency business plan.

However, if that agency implemented an information system that achieved the same results as the 100 workers at a fraction of their cost, federal approval (APDs et al) would be required. For purposes of this example, we ignore the well-known reluctance of most state legislatures to increase state staff. The problem here is that the federal IT approval process has the potential to create incentives for states to make decisions that do not always coincide with best business practices.

In 1997, the American Public Human Services Association (APHSA) issued a report titled "Tools for Information Systems Reform."[2] One of the main recommendations of this report was that the APD process was obsolete and should be abandoned. This report cites the recent restructuring efforts in government, with welfare reform as an example, as an opportunity to leave behind the outdated elements of federal automation oversight policy as exemplified by the APD process. APHSA called for reforms that would enable agencies to obtain the maximum benefit available from current information technology "rather than perpetuating today's failed structure." This report was issued more than 3 years ago, but no major changes in the process have been made.

We believe that changes should be made in the process in order to better meet the needs of the states and the federal government, to squeeze unnecessary cost out of the process of creating human services information systems, to save time, to recognize that techniques for systems development have changed, and to recognize that many states have improved their ability to produce good results. But how can changes that would meet the needs of the two major players in the process, the federal government and the states, be defined? First, we need to find a way to identify the issues underlying those needs. We propose a process that identifies the core interests of the parties.

## IV. A Process to Identify Interests and Find Resolution

Interest-based problem solving is part of a system of "principled negotiation" popularized by Harvard researchers Roger Fisher and William Ury in their book, Getting to Yes: Negotiating Agreement Without Giving In. Fisher and Ury propose that a good agreement is one which is not only wise and efficient, but one that also improves the

[2] Report of APHSA Information Systems Reform Workgroup. Washington, D.C., 1998.

parties' overall relationship. Wise agreements are defined as agreements that satisfy the parties' interests and are fair and lasting.

Traditional negotiations often take the form of positional bargaining. In positional bargaining, each party begins the negotiation with their entrenched position on an issue. The parties then bargain until they accept one position. Back and forth negotiations over the price of a car is the classic example of positional bargaining. Fisher and Ury argue that positional bargaining is an inefficient means of reaching agreements, and the agreements tend to neglect the parties' true interests. Fisher and Ury maintain that this is often not an effective method of negotiation. Positional bargaining often results in one or both parties feeling like they have lost something. This type of problem solving can be harmful to long term relationships such as the one between federal and state entities in the IT approval process.

Principled negotiation provides a better way of reaching wise agreements while maintaining important long-term relationships. Principled negotiations can be illustrated with the following examples.

The first example comes from Getting to Yes. This example concerns two boys sent to the store for an orange. When they arrive at the store, they simultaneously discover that there is only one orange left. The shopkeeper leaves the resolution of the dilemma to the two boys. One option for the boys would be to adopt a positional bargaining stance and each would try to "win" by out negotiating with the other boy. No matter what the eventual resolution the chances are high that one boy will not get what he wants and any relationship between the two boys will be harmed in the process. Conversely, the boys could adopt an interest-based stance. In that case, the boys would try to identify the issues that lie beneath each other's position and try to find a resolution that satisfies those underlying interests. The boys might discover that one of them needs the rind for baking while the other needs the flesh of the orange for juice.[3] By identifying interests and seeking a solution to a problem that is acceptable to both, the entire process of positional bargaining is avoided and a solution is found that is workable and that actually reinforces the existing relationship rather than harming it.

Roger Fisher described a more sophisticated example in a March 7, 2001, interview with "Biz Law Journal."[4]

> *In 1998, one of my Kennedy School students was elected president of Ecuador, and I went down and worked with him on a solution to the fifty-six year old boundary war. And, they signed an agreement and settled all their differences.*
>
> *… in the Ecuador-Peru conflict, we agreed that the entire disputed territory would be an international conservation park. The only battle Ecuador ever won over Peru was a little settlement in the jungle. Ninety-percent of Ecuadorians said they didn't want an agreement unless Ecuador kept this particular settlement - it's like the Alamo for them. The Peruvians said that the Ecuadorians had invaded their territory to get the settlement, so Peru must get it back. The outcome was to set the boundaries of the international conservation park so that the settlement is inside Peru, but one square kilometer around the land, right next to the border, is owned by the government of Ecuador even though it's located within the territory of Peru - just like countries own embassies inside other nations. The President of Ecuador can say: "We didn't give up the settlement because we own it. And, the President of Peru can say: "We didn't give up the settlement because it's part of our sovereign territory." Each Congress ratified the agreement - done.*

This example shows how identifying the underlying interests and pressures on each side can lead to a solution acceptable to all. This example is particularly applicable to negotiations concerning the IT approval process because of the outside factors. The leaders involved had to not only find a solution to the issue at hand, but they also had to consider other stakeholders that had veto power over any agreement that might have been reached. The IT approval process has a similar dynamic because a solution must not only be acceptable to the involved state and federal agencies, but it must also be acceptable to the Congress and, in a general sense, to state legislatures.

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[3] Fisher, Roger and Ury, William (2nd edition edited by Patton, Bruce), G*etting to Yes: Negotiating Agreement without Giving In, 2nd Ed.,* Penguin Books, New York, NY, 1991, p. 73.

[4] Anderson, Brian D., *Getting to Yes' 20th Anniversary,* Biz Law Journal, http://www.bizlawjournal.com/interviews, 2001.

Fisher and Ury developed four principles that must be followed if principled negotiation and, by extension, interest-based problem solving are to be effective. These principles should be used throughout the process in every stage of negotiation or problem solving:

1. **Separating People and Issues** – An important element of this principle is realizing that, in the words of Fisher and Ury "negotiators are people first."[5] Every negotiator has an interest not only in the immediate problem that needs resolution, but also in the relationship between the negotiators. When this principle is applied to possible changes to the IT approval process, the special problem solving nature of the negotiations for change are apparent. Regardless of whether the IT approval process is changed or not, both state and federal entities involved in the dialogue need to maintain the trust and good relations that have been developed over time.

   The "people" part of the process can be difficult because of differences in perception, emotional responses, and communication problems. Differences in perception arise because most conflicts are based in differing interpretations of the facts. It is important to place yourself in the other side's position and to try to understand the difficulties and pressures that the other side faces. Open communication by both parties can help eliminate perception difficulties. In the case of the IT approval process, the first step is to identify both parties interpretation of the facts surrounding the IT approval process and to effectively communicate those interpretations to the other party.

   Emotions can be a factor since people are often uncomfortable questioning the status quo or questioning other people's positions. The parties must acknowledge this unease and work on ways to present and discuss problems in the least emotional manner possible.

   If good communication is not present, both parties are tempted to stay entrenched in their own position and to ascribe the worst motives to the other.

[5] Fisher, p. 18.

Generally the best way to deal with people problems is to prevent them from arising. People problems are less likely to come up if the parties have a good relationship and think of each other as partners in negotiation rather than as adversaries.

2. **Focus on Interests –** Effective problem solving focuses on the parties' interests instead of their positions. As Fisher and Ury state, "Your position is something you have decided upon. Your interests are what caused you to so decide."[6] This is the step that is crucial to any discussion about reforms to the IT approval process. Even though the state and federal agencies have common goals of producing IT systems that are effective and produce the best value to the taxpayer, the tendency in any discussion is to adopt a positional bargaining stance. If progress is to be made, all parties have to move beyond this stance and engage in constructive efforts to identify and satisfy the other party's interests.

   The first step is to identify the parties' interests. This can be done by asking why the federal and state agencies hold their respective positions, and why they do not hold alternative positions. Both parties have a multitude of interests that underlie the positions they adopt. Also, there are many interested parties on each side, several federal entities and many states, each of which may have somewhat differing interests. Once the parties have identified their interests, they must communicate them to each other. If Party A wants Party B to take his or her interests seriously, Party A must explain these interests clearly. Party B will be more likely to consider Party A's interests if Party A shows that he or she is open to considering the interests of Party B. Discussions should stay positive and focus on the desired solution, rather than focusing on past events. Parties should keep their interests in mind at all times, but remain open to different proposals and perspectives.

3. **Generate Options** – Generating options is the step where the interests identified in the previous step are translated to concrete options that are in the interest of both parties. Merely understanding the interests of the other side is not sufficient. Each party must then be willing to try to find solutions that satisfy the interests of both parties.

[6] Fisher, p. 41.

Fisher and Ury list four primary obstacles to creating fresh options for solving a problem. First, the affected entities may decide on an option too quickly and therefore fail to consider all possible alternatives. Second, the entities may be predisposed to considering only a small subset of all of the possible solutions and therefore ignore options that could address their interests in another area of the discussions. Third, negotiators may define the problem in positional win-lose terms that ignore the possibility that solutions exist that are not exclusive of either party's interests. Finally, one of the negotiators may feel that he or she has no responsibility in the matter and simply wait for the other side to come up with a solution to the problem.

Fisher and Ury discuss techniques for overcoming these obstacles. They emphasize the importance of separating the process of creating options from the process of judging those options. Full creativity should be encouraged during the option generation process. Judgement of those options can come later when it is not disruptive to the option generation process. Win-lose mentality can be avoided by focusing on shared interests. When the parties' interests differ, options should be generated that bring those positions together as closely as possible. The authors emphasize that each side should be willing to identify options that aid the other side's interest without seriously damaging their own.

An important tool for overcoming obstacles is to identify the key decision makers and target proposals directly toward them. Proposals are easier to agree to when they contain legitimate solutions that satisfy the most significant interest of both sides.

4. **Use Objective Criteria** – Whenever possible, the parties should use objective criteria to help resolve their differences. Without objective standards, reasonableness is difficult to define and deadlocks are hard to overcome.

   The first step is to jointly develop objective criteria that are legitimate and practical. Professional standards, such as those related to project management, and generally recognized best practices are sources of objective criteria that could be used in the

discussion about changes in the IT approval process. What is important is that the criteria are objective in the eyes of both parties.

One way to test for objectivity is to gain agreement from both sides that the criteria are fair and that they agree to be bound by them. The parties can then establish a fair procedure for resolving their dispute. The parties should keep in mind the distinction between a process to resolve differences and the solution to those differences. By first concentrating on process, parties can find common ground that help resolve the actual problem.

## V. Identifying the Interests

We now move from the theory of principled negotiation to an example of how it could be applied in the current situation. We describe state interests, federal interests, and a possible solution to illustrate the process and to encourage discussion.

The first step is for the parties to identify the underlying interests on which possible solutions will be based. These discussions could take place within the framework of the Working Seminar on Social Program Information Systems (Working Seminar), jointly established by the U.S. General Accounting Office (GAO) and the Rockefeller Institute of Government. The Working Seminar has representatives from the federal government, state governments, vendors, and other organizations. In part in response to a recommendation in an April 2000 GAO report, federal government agencies represented on the Working Seminar have formed a State Systems Requirements Reform Project to address the unresolved issues surrounding the current IT approval process.

The examples of state and federal interests that are described below may not be comprehensive, but the process we are proposing is intended to identify the actual interests of both parties. With the exception of the second set of "Federal Interests," these interests are the work of the authors.

**State Interests**

Some interests are universal. All parties want successful projects that obtain timely, beneficial results for the money spent. However the states have certain relatively unique "drivers" and constraints that affect their particular interests. To varying degrees, depending on whether they are "state administered" or 'county administered," the states are responsible for actual service delivery and the success or failure of systems projects can have a direct effect on worker productivity and morale as well as client services.

Many HHS executives have long acknowledged that information technology is critical to the agency mission and that investment must be made in it. However, state information technology functions have traditionally been under-resourced as the information needs of programs have competed with client services and "new roofs on buildings." Also, to some extent, many in the vendor community have only recently acknowledged the uniqueness of human services information processing needs. Recent advances in systems development methodologies and techniques have allowed vendors to create systems that are more specifically aimed at the business needs of human services. State legislatures are keenly aware of the large amount of money that is spent each year in every state and of the highly visible and expensive failures that seem to occur with some frequency. Thus, because of mission criticality, competition for funds, the size of the investment, the risk of failure, information technology projects in the states are closely scrutinized for risks, project management, schedules, spending plans, and results. State Interests include:

**A. Good Projects**

1. *Obtaining competent outside help*

   States want to implement "state of the art solutions" in a timely manner. This requires that state IT staff be competent in the required technologies. Inhibitors include:

   Technical expertise is not available because "in house" staff either lack sufficient experience in a particular technology, are not proficient in its application, or are entrenched in legacy system support and are reluctant to embrace change;

Support of ongoing operations does not allow staff to be "freed up" to support new projects;

Budgetary and state hiring limitations make it difficult to attract and retain permanent experienced IT staff.

2. *Minimize risk of failure*

   States know that two out of three information technology projects fail to meet their objectives (GartnerGroup) and risk management becomes especially important.

3. *Deliver successful projects – on-time, within budget, within scope, meets business needs, system that works*

   Proven project management principles such as are defined in the "Project Management Book of Knowledge" (PMBOK) help managers ensure that projects are successful. These principles help project managers:

   Define the boundaries of the project

   Define project deliverables

   Develop communications plans

   Develop risk mitigation plans

   Develop project auditing and reporting mechanisms

   Develop realistic project schedules

   Define the resources required for success

4. *Get results that were expected*

   Customers expect projects to deliver specific results. Often, the results do not meet customer expectations for a variety of reasons such as poor planning, inadequate funding, poor definition of deliverables, lack of top management sponsorship, poor design, insufficient testing, and insufficient time allowed for pilot implementation.

5. *Obtaining sufficient funding*

   Many projects fail because of inadequate resources. Projects can be under funded because of poor financial planning, agency managers and state

legislatures that have higher priorities, midstream changes in priorities, and unforeseen cost overruns. Whatever the cause, the outcome can be the same. Projects that are under funded rarely deliver what customers want and often fail before completion.

## B. Relationships and Credibility

1. *Create credibility in state legislature and with other stakeholders that the agency managing the project can deliver*

   "Success breeds success." Successful systems development efforts create internal and external credibility that makes it easier to maintain funding levels for IT as a whole and to obtain funding for other projects.

2. *Have a non-adversarial relationship between state and outside parties such as federal government, vendors, and others.*

   All participants in the process have a "vested interest" in the outcome. Cooperative, non-adversarial relationships increase the likelihood that success will be achieved.

3. *Create long-term relationships with vendors*

   Many private sector entities form long-term customer/supplier relationships that recognize and take advantage of supplier core competencies. States are usually required do procurements on a project-by-project basis. This approach tends to limit opportunities to create long-term relationships that could be beneficial to both parties. On the other hand, states need to be careful that limited options and limited flexibility do not result when they become too reliant on a single vendor and on proprietary software.

## C. Results and Accountability

1. *Meeting customer business needs*

   IT exists solely to meet customer business needs. (It should be noted that the intense pressure to meet deadlines in this high visibility environment encourages a tendency to adopt shortcuts and reduce scope. In this situation the ability to meet customer business needs suffers.) In order to do this, the IT

function must understand the customer's business and work closely with customers to:

Help define system requirements based on business needs;

Keep customers involved throughout the entire systems development lifecycle (requirements definition, design, testing) to ensure that systems meet or exceed customer expectations;

Educate business staff in the use of technology when appropriate;

Advise customers on the appropriate uses of technology.

2. *Obtain maximum benefit for minimum cost; deliver best value to citizens of the state for the money spent*

   All of the factors needed for a successful project – project definition, planning, control, execution – can affect whether the system that is developed provides a good result for a reasonable cost. Projects that do not do this can be labeled as failures even though, ultimately, they meet customer business needs

3. *Best value procurement*

   "There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper, and the people who consider price only are this man's lawful prey. It is unwise to pay too much, but it is even worse to pay too little. If you pay too much, you lose some money, that is all. If you pay too little, however, you will sometimes lose everything, as the thing you bought cannot do the intended job." John Ruskin (1819-1900). Because of complexity and mission criticality, buying information technology is not like buying pencils. Many states have begun to realize that low cost does not necessarily produce an acceptable result in the long run. As a result, "best value" procurement is being used more and more. Some factors that can lead to best value are:

   Performance

   Vendor viability (market share, financial strength)

   Vendor track record

   Vendor history with the procuring agency

   Warranties

Vendor's future plans

Vendor support

Vendor references

Visits to other customers

Range of services provided

Cost

**D. Efficiency**

1. *Leverage what others have done – inside the state and in other states*

   Two cliches, "don't reinvent the wheel" and "not invented here," while common, are in basic opposition to each other, one pushing toward cooperation and sharing, the other encouraging rejection of things someone else has done. In today's world of scarce resources and increasing calls for standardization, the simple fact is that states do not have the luxury of always creating from scratch. There is increasing pressure to share concepts, techniques, best practices, design, code, and even system operation across traditional agency and geographical boundaries.

2. *Leverage own knowledge base and infrastructure*

   Complex technical environments are expensive to maintain. A lack of standards, or the frequent acquisition of products and applications that do not comply with standards, increases technical complexity. States generally prefer to develop or acquire new systems that are compatible with existing technology in order to use existing processes and skills of staff. An exception would be when there is a conscious decision to move to a new technology. In this case the cost of the move is factored into the decision.

3. *Eliminate duplication – reporting, justification, approvals*

   We have discussed the federal approval process. In addition to that, states have their own internal approval processes that can involve approval by internal agency management, central IT authority, central budget authority, legislature, and legal authority. Most of these approval authorities require justification of the project and frequent progress reporting. Approvals,

justifications, and reporting are frequently unnecessarily duplicative as to content and format. Unnecessary duplication increases cost and time.

4. *Get through the system development life-cycle as quickly as possible*
   System development projects that last a long time become exposed to increasing risks such as drying up of funding, loss of top management support, technical obsolescence, changed business requirements that dictate mid-course changes, and loss of key personnel.

5. *Perform only activities that add value (value added process analysis*)
   Resources are tight. Customer needs are almost infinite. Public expectations for human services programs are high. As much as possible, state agencies must focus efforts only on those activities that add value in relation to successful IT projects and, ultimately, service to clients. Bureaucratic processes, time delays, cost increases, and duplicative activities are not seen as adding value.

**Apparent Federal Interests**

Shown below are two sets of apparent federal interests. Because these are only "apparent" federal interests, as inferred by two people who have never worked in the federal government, and because they are included primarily to complete the example of principled negotiation, they are of necessity considerably less fleshed out than our rendition of the state interests. In a process of principled negotiation, both sets could very well be significantly different from what appears below.

The first set was compiled by the authors and describes interests that we believe are implied by the existing IT approval process.

The second set is from the Objectives of Federal Requirements section of the handout that accompanied the informational material from the January 2001 meeting of the State Systems Requirement Reform Project. This second set is probably not complete but is the best we have at this time.

**First Set**

**A. Accountability**

1. Create systems to provide the data the federal government needs to assess results of programs, to set policies, and to report to the Congress.
2. Meet congressional mandates.
3. Maintain credibility with Congress.
4. Follow rules (Code of Federal Regulations).
5. Be accountable for the funds the federal agencies are responsible for.
6. Obtain best value for federal investment.

**B. Engage in State Oversight**

1. Create similar levels of technology to support federal programs within the states.
2. Obtain uniformity in the states – at a high level (e.g., each state has a Medicaid management information system).
3. Competition and open procurements.
4. Not set the wrong precedents.

**C. Obtain Good Results**

1. Provide sufficient funding.
2. Projects that are on time and within budget

**Second Set**

This set of apparent federal interests comes from the "Objectives of Federal Requirements" informational material handed out at the January 2001 meeting of the State Systems Requirement Reform Project. These objectives include:

1. To provide states with flexibility while ensuring accountability.
2. To ensure that state systems projects are successful, and that they provide an appropriate level of service to state clients.
3. To ensure state systems support programs requirements, federal regulations and desired outcomes.
4. To ensure that federal partners are included in planning and developing large systems.

5. To ensure that information is provided to permit federal partners to determine that projects are satisfactorily managed at reasonable cost by state partners.
6. To ensure free and open competition.
7. To facilitate the transfer of standardized case information from state to state, states to the federal government, and program to program, while ensuring system security and confidentiality.
8. To ensure that federal staff have the opportunity to influence, in advance, major state systems development activities.

Trying to ascertain the actual interests that underlie these objectives a revealing exercise. For example, objective number eight is very broad and probably has many specific interests underlying such a sweeping objective. Identifying these interests may well lead to discussions about how to fulfill those interests without always relying on the current approval process. The principled negotiation approach would include the identification of such interests.

## VI. Creating Options for Improving the Process

The next step in principled problem solving is to create options for mutual gain. This process would take place after the interests have been identified and discussed. One possible option for improving the process is presented in the next section.

### One Approach That Might Meet Both Federal and State Interests

Many states have much greater capacity for successful IT development and implementation than in the past – project definition and scope control are better, procurement is better, project management is better, and risk management is better. Because of rapidly changing technology and changing business needs, states need more flexibility and more opportunity to adjust IT projects "on the fly" than in the past. The federal government is less interested in uniformity within the states than in the past. One view of Federalism does not require treating every state the same. The federal government has less capacity to perform oversight, both approval and monitoring, of state IT projects than in the past. Thus, in order to stimulate discussion, we offer this set of features of a reengineered approach by which the federal government approves and

monitors the creation of state human services information systems. (In reality, there would need to be a principled negotiation that has as its goal the creation of a reengineered approval and monitoring process. The features of a new process may, in fact, look nothing like what appears below.)

1. Identifies factors that indicate likelihood of successful development and implementation of information systems. Examples of criteria are:

    IT governance process

    Project definition

    Development methodology

    Procurement

    Project management

    Scope control

    Risk management

    Not complex technical environment (e.g. limited number of platforms, development tools, and database products; desktop standards, Web development standards)

    History of successful projects that advance the agency's human services program business needs

    No failed projects in past 3 years. (Three years is enough time to enable the state to improve its capacity in the other categories.)
2. Create criteria against the factors
3. Federal government examines individual states and "certifies" those that meet the criteria
4. Certified states receive less federal oversight and more flexibility

    Higher approval thresholds

    No approval needed for software maintenance, off-the-shelf-purchases, and hardware purchases of any dollar amount (states must report purchases over a certain amount for federal financial planning purposes)

    Fewer approval steps

Could consider making IT part of the State Plan as recommended in the 1997 APHSA report

Short list of things that must be included in the RFP and then no federal prior approval of the RFP

Short list of things that must be included in the contract and then no federal prior approval of the contract

Faster approvals

Quarterly or annual reporting on project progress

5. Periodic federal review to verify that states still meet the criteria for less oversight
6. States having projects that fail could lose certification
7. Three-year pilot in five states (3 years to allow full system development lifecycle to occur)

    Small, medium, large states

    Umbrella agency

    Strong state central Chief Information Officer (CIO)) function

    Weak state central CIO function

    Different federal regions (to test ability to apply criteria uniformly)
8. Develop criteria for evaluation of pilot
9. Adjust program features and characteristics as result of evaluation of pilot
10. Expand certification program nationwide

States would need to work to improve their processes and their track record in order to achieve and maintain certification. The federal agencies would need to evaluate the capability of central office and regional staff to be sure they would continue to add value in the new oversight environment. Federal staff would probably need training to shift skills from evaluation of the merits and progress of individual projects to the evaluation of the capacity of the states to produce good results. The federal agencies could also offer technical assistance to help states create to capacity to meet the certification criteria. There has been much talk about a federal role in dissemination of methodologies, techniques, proposed standards, and best practices; and as a broker of cooperation between states. The need for this federal assistance could be even greater

in an environment where states share data about clients, share techniques, and are striving to improve their own processes in order to achieve certification.

## VII. Objective Criteria

The practice of principled negotiations includes the concept that external objective criteria should be used when evaluating possible options. If our model were adopted, the negotiation process to create a certification program should contain well-defined criteria for initial certification and retention of certification. Accepted industry practices and performance standards should be used to define the requirements for certification and the characteristics of federal oversight of the certified states.

This objective criteria step can help address one problem with the existing approval process; that is there are no specific incentives that encourage good project planning and execution. A certification system that is based on objective criteria would be a powerful incentive for sound planning and execution. States would be motivated by the more flexible oversight that certification would bring. Currently, the major recourse that the federal agencies have when projects do not produce satisfactory results is to withhold federal funds or seek their return. A loss of certification and its accompanying increased federal oversight could be an intermediate step before funding is curtailed.

## VIII. Next Step

What we are proposing is consistent with discussions that have recently taken place between the federal and state stakeholders at the meetings of the State Systems Requirements Reform Project. This group could continue to work on the problem.

All parties would need to commit to the principled negotiation approach at the outset of the process. The discussion of interests is a good vehicle for ensuring that everyone supports the process. If the interests of each side are explored fully and taken seriously by all participants, then the resolution coming out of the principled negotiation process should be embraced by all parties.

We suggest that our proposal be used as a basis for further discussion and, ultimately, the creation of a reengineered process for federal approval and monitoring of state human services IT projects.